

Application No. 10/603,397

AMENDMENTS TO THE CLAIMS

A detailed listing of all claims that are, or were, in the present application, irrespective of whether the claim(s) remains under examination in the application are presented below. The claims are presented in ascending order and each includes one status identifier. Those claims not cancelled or withdrawn but amended by the current amendment utilize the following notations for amendment: 1. deleted matter is shown by strikethrough for six or more characters and double brackets for five or less characters; and 2. added matter is shown by underlining.

1-9. (Cancelled).

10. (Currently Amended) A dynamic bioabsorbable staple for use with a wound in living human tissue having opposed sides, the staple comprising:

a bioabsorbable staple body including a pair of staple arms operably joined at a shoulder portion by a backspan, each arm further including an elbow portion having an inwardly projecting cleat, the staple arms, the inwardly projecting cleats and the backspan defining an internal tissue capture zone; and

each shoulder portion including an interior shoulder angle generally defined by the backspan and the staple arm, the shoulder portion constructed so that the interior shoulder angle is between 70°-100° in a first position at an insertion time, the interior shoulder angle transitioning to between 120°-180° in a second deformed position at a second time subsequent to the insertion time in response to lateral forces naturally exerted by the opposed sides of the wound and deformation of at least the shoulder

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portions of the bioabsorbable staple body caused by polymeric creep and absorption of the bioabsorbable staple body in the living human tissue.

11. (Original) The staple of claim 10, wherein each elbow portion includes an interior elbow angle generally defined by the staple arm and the cleat, the elbow portion constructed so that the interior elbow angle is less than 70° in the first inserted position at the insertion time, the interior elbow angle transitioning to a maximum of 90° in the second deformed disposition at the second time.
12. (Original) The staple of claim 10, wherein the second time is not less than 12 hours subsequent to the insertion time.
13. (Cancelled).
14. (New) A dynamic bioabsorbable staple for joining living tissue, comprising:
 - a staple body made of a bioabsorbable material including a pair of staple arms operably joined by a backspan, each staple arm including:
 - shoulder means for dynamically transitioning the staple arm over a range of positions from an initial deployed position to a subsequent deformed position in response to forces exerted by living tissue on the staple arm after deployment of the staple body in living tissue; and

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elbow means for retaining tissue throughout the range of positions and longer than a minimum degradation period of the bioabsorbable material in living tissue.

15. (New) The dynamic bioabsorbable staple of claim 14, wherein the elbow means comprises a rounded cleat projecting inwardly into a tissue capture area defined by the staple arms, the backspan and the rounded cleat of each staple arm.
16. (New) The dynamic bioabsorbable staple of claim 14, wherein the shoulder means defines an interior shoulder angle of between about 70-100° when the staple body is in the initial deployed position.
17. (New) The dynamic bioabsorbable staple of claim 14, wherein the shoulder means defines an interior shoulder angle of between about 120-180° when the staple body is in the subsequent deformed position.
18. (New) The dynamic bioabsorbable staple of claim 14, wherein the initial deployed position has a minimum dry initial closure strength of about 1.2 lb_F.
19. (New) The dynamic bioabsorbable staple of claim 14, wherein the elbow means includes means for presenting a maximum insertion width of the elbow means that is greater than a width of a pierced opening in living tissue through which the staple arm is deployed.

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20. (New) The dynamic bioabsorbable staple of claim 19, wherein the means for presenting a maximum insertion width functions to cause at least a portion of living tissue surrounding the pierced opening to be stretched over and elastically retained by the elbow means for longer than the minimum degradation period of the bioabsorbable material in living tissue.

21. (New) The dynamic bioabsorbable staple of claim 14, wherein the bioabsorbable material comprises a blended bioabsorbable copolymer.